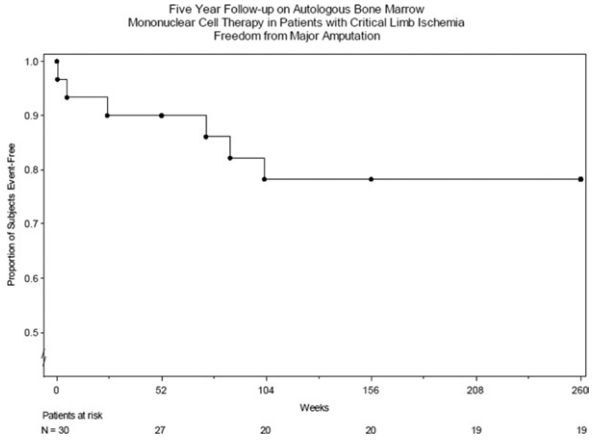

Fig 2.

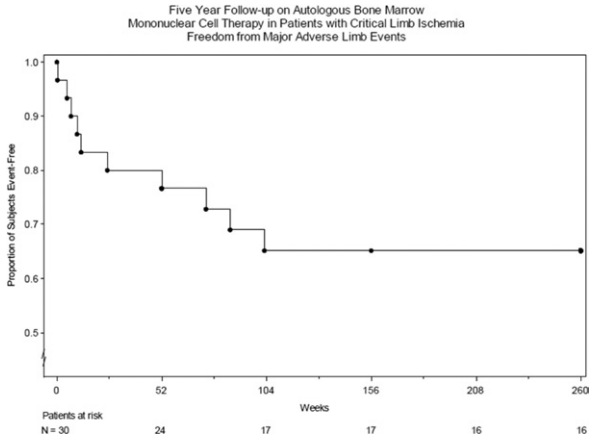

Fig 3.

Do Patients With Hostile Necks Have an Increased Rate of Restenosis After CAS?

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Objectives: The purpose of this study is to review a single institution's experience of carotid artery angioplasty and stenting (CAS) and re-intervention rates.

Methods: A retrospective analysis of patients that underwent CAS at a university medical center was performed over an 8-year period from August 2003 to August 2011. Data analysis included patient demographics, operative details, radiological information and postoperative outcomes.

Results: 317 CAS were performed during the study period. The mean age of the cohort was 73.6 (range 41-94) years and 205 (64%) procedures were performed in males. Degree of stenosis was ≥80% in 263 (83%) patients and 143 (45%) had symptomatic disease. 145 (46%) of the patients had a hostile neck (previous neck surgery and/or radiation therapy), 17 (5.3%) had a high anatomic lesion, and the remaining were considered medically unfit for surgery. 303(96%) patients have 30-day follow-up with a total mean follow-up of 21.8 (range 1-85) months. Restenosis of ≥80% was found in 21 patients (6.6%) with a mean time to restenosis of 14.7 months. For patients with restenosis, 3 patients had an occlusion of their stents and 13 (61.9%) patients had a re-intervention of either balloon angioplasty or CAS and the remaining were observed. Of those patients who underwent re-intervention, 3 (14%) were due to symptomatic disease and the remaining were treated at the physician's discretion. Patients with a hostile neck had a significantly higher restenosis rate of 12.5% versus those with de-novo lesions had a restenosis rate of 3.6% ($p<0.05$). For the entire cohort, 30-day rates of stroke, myocardial infarction (MI) and death was 1.6%, 1.3% and 1.9%, respectively. The combined 30-day stroke/death rate was 3.5%. At a mean follow-up of 21.8 (range 1-85) months the stroke and mortality rates were 2.5% and 14.5%.

Conclusions: CAS can be performed safely with good 30-day outcomes and a low incidence of stroke at two years. Restenosis rates are significantly higher in patients with "hostile" necks. However, these were often amenable to endovascular re-intervention.

Long-Term Persistent Type 2 Endoleak Following Endovascular Abdominal Aortic Aneurysm

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Objective: Management of type 2 endoleak (T2E) following endovascular abdominal aortic aneurysm repair (EVAR) has evolved over the last decade to observation and selective intervention. The aim of this study was to evaluate long-term outcomes in patients with T2E.

Methods: Data from 779 patients who underwent EVAR over a 10-year period from 1999 to 2009 were analyzed for incidence and long-term outcomes of T2E. Clinical records and CT angiography studies performed within 6 months following EVAR and at least annually thereafter were assessed.

Results: 159 patients (20.4%) were identified with a T2E over a mean follow-up of 37.3 months (range: 6 to 121 months). Patients were classified according to the time of occurrence of their T2E post-EVAR: early (0-6 months with resolution thereafter. n=38, 23.9%), late (first noticed >24 months, n=20, 12.6%) and persistent (present at all times, n=101, 63.5%). The average sac size change was: early=1.36 ± 11.15mm, persistent=0.16 ± 6.66mm and late=0.65 ± 6.43mm. There were no aneurysm related deaths; 73 patients died from unrelated causes during follow-up. Sixty-three patients underwent endovascular intervention to treat the T2E: 11, 43 and 9 in the early, persistent and late groups, respectively. Prior to 2005 intervention for T2E was aggressive, but subsequent to this an observational approach was adopted. Mean sac diameter change in patients undergoing intervention prior to 2005 was -0.19 ± 9.14mm and subsequent to 2005 was +0.69 ± 7.51mm. Fifteen (24%) patients underwent >1 intervention. There were two complications: one sigmoid ischemia requiring colectomy and one psoas infarction. Using a Weibull analysis, the estimated survival free of endoleak after an intervention at 1 and 2 years was 40% and 30% respectively. However, further sac growth at 1 and 2 years occurred only in 45% and 42% respectively. Two patients underwent conversion to open repair, one for contained rupture.

Conclusions: In-spite of adopting an observational policy towards T2E nearly half of all patients with persistent and late onset endoleaks required intervention for enlarging sac size over time. Although success at controlling the endoleak was low with endovascular intervention, subsequent sac growth was halted in the majority. Close surveillance of patients with T2E is still recommended.

The Effect of Cancer on Percutaneous Intervention for Infrainguinal Peripheral Artery Disease: Are Patency Rates Impacted?

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Introduction: It has been hypothesized that the hypercoagulable state associated with malignancy results in decreased patency after peripheral arterial endovascular intervention. We aimed to determine the long-term outcomes of cancer patients undergoing percutaneous interventions for PAD.

Methods: A prospective database identified patients with a diagnosis of cancer who subsequently underwent percutaneous infrainguinal arterial interventions from 2004-2009. Patient demographics, medical co-morbidities, procedural details, and outcomes were reviewed by a dedicated research team. Patients were followed clinically and by duplex ultrasound at 6 month intervals. Kaplan-Meier survival analysis and Cox proportional hazards model were performed.

Results: Of 1220 patients undergoing peripheral endovascular intervention, 174 (14%) were identified as having a diagnosis of malignancy. These patients were compared to controls with regard to smoking history (51 %vs.58%;p=.012), end stage renal disease(5%vs 10%;p=0.016), and diabetes(49%vs 59%;p=0.016). Primary patency rates for the cancer patients and controls were compared at 3 years post-intervention (50.5%vs.41.9%; p=0.007). To determine if cancer is an independent risk factor for poor patency, a multiple regression analysis was performed, controlling for diabetes, renal failure, smoking history, and indication for intervention (claudication or critical limb ischemia) to compare patency rates in cancer patients to controls (p=.215). (Table 1)